

Claims

1. A screening method of a substance that inhibits interaction between anti-troponin I antibody and cardiac troponin I, which comprises measuring and evaluating the inhibitory activity of a test substance on interaction between anti-cardiac troponin I antibody and cardiac troponin I after contacting the anti-cardiac troponin I antibody, the cardiac troponin I and the test substance.

2. A screening method of a substance that inhibits the effect of anti-troponin I to a target tissue, which comprises measuring and evaluating the inhibitory activity of a test substance on the effect of anti-cardiac troponin I antibody on a target tissue after contacting the anti-cardiac troponin I, the target tissue and the test substance.

3. The screening method according to claim 2, wherein the target tissue is a myocardial cell.

4. A pharmaceutical composition of therapy for cardiac disease which is made by steps comprising a step of selecting a substance with activity by the screening method according to any one of claims 1 to 3, a step of manufacturing the above selected substance, and a step of mixing the substance manufactured by the above described step with a pharmaceutically acceptable solvent for formulation.

5. A pharmaceutical composition of therapy for cardiac disease, which comprises at least one selected from cardiac troponin I protein, a partial protein thereof, and a modified protein thereof as an active ingredient.

6. The pharmaceutical composition of therapy for cardiac disease according to claim 4 or 5, wherein the cardiac disease is dilated cardiomyopathy.

7. A therapeutic base material for cardiac disease coupled with a substance selected by the method according to any one of claims 1 to 3.

8. A therapeutic base material for cardiac disease coupled with at least one selected from cardiac troponin I, its partial protein, and a modified protein thereof.

9. The therapeutic base material for cardiac disease according to claim 7 or 8, wherein the cardiac disease is dilated cardiomyopathy.

10. An apparatus for therapy of cardiac disease, which comprises a plasma separating apparatus; an extracorporeal immunity absorbing apparatus that contacts between separated plasma and the therapeutic base material for cardiac disease according to claim 7 or 8; and a reflux apparatus which mixes plasma treated with the above described extracorporeal immunity absorbing apparatus into separated hemocytes, and send it back into body again.

11. The apparatus for therapy of cardiac disease according to claim 10, wherein the cardiac disease is a dilated cardiomyopathy.

12. A method for making an animal model for evaluating cardiac disease, which comprises administering the anti-cardiac troponin I antibody.

13. The method for making an animal model for evaluation of cardiac disease according to claim 12, wherein the cardiac disease is dilated cardiomyopathy.

14. A method of screening a substance for therapy of cardiac disease, which comprises determining the effect of a test substance to cardiac disease after administration of the substance to an animal made by the method according to claim 12.

15. A method of screening a substance for therapy of dilated cardiomyopathy, which comprises determining the effect of a test substance to cardiac disease after administration of the substance to an animal made by the method according to claim 13.

16. A pharmaceutical composition for therapy of dilated cardiomyopathy, which comprises a substance that inhibits the production of anti-cardiac troponin I autoantibody as an active ingredient.

17. A diagnosis method of dilated cardiomyopathy, which comprises measuring an amount of anti-cardiac troponin I autoantibody.